Liquoid Broth M817

Liquoid Broth is used for screening of blood specimens from suspected bacteremic cases.

Composition***

Ingredients	Gms / Litre
Calf brain, infusion from	200.000
Beef heart, infusion from	250.000
Proteose peptone	10.000
Sodium chloride	5.000
Disodium phosphate	2.500
Dextrose	2.000
Sodium polyanethol sulphonate	0.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 37.5 grams in 1000 ml distilled water. Heat if necessary to ensure complete solution. Dispense into bottles or tubes and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. If desired, 1 gm/litre agar can be added to encourage growth of anaerobic organisms. For best results, use the medium on the day it is prepared otherwise boil or steam it to remove dissolved oxygen just before use.

Principle And Interpretation

In most bacteriemic conditions in man, the organisms are not numerous. Therefore for their demonstration by blood culture, relatively large amount of blood e.g. 5-10 ml should be used as inoculum. As the bloods natural bactericidal or bacteriostatic action may interfere with the growth of any bacteria present, diluting the blood with medium should annul this effect. The technology of blood culture was revised by Gould and Duerden (1). Upto 10 ml or more blood may be added to 100 ml of broth without a detectable antibacterial effect. The antibacterial effect may be further prevented by incorporation of substances such as sodium polyanethol sulphonate (SPS). Liquoid Broth is used for the culturing of blood specimens from suspected bacterimia cases (2). Liquoid (Sodium polyanethol sulphonate) is a good anticoagulant. Moreover it is not inhibitory and has the added advantage of annulling the natural bactericidal action of blood (3).

The medium is composed of rich ingredients for blood culture. Beef heart and calf brain infusion and proteose peptone provide the necessary carbonaceous and nitrogenous nutrients, vitamins and growth factors to the organisms. Dextrose is the carbon source and sodium chloride maintains the osmotic equilibrium of the medium. It is advisable to seed more than one medium for blood culture. One of each set of bottles should be incubated in an atmosphere of air with 10% CO2. It is essential to loosen the caps of bottles during incubation. Growth may produce a generalized turbidity; make subculture from all bottles to solid media.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Light amber coloured, clear solution without any precipitate

Reaction

Reaction of 3.75% w/v aqueous solution at 25°C. pH : 7.4±0.2

Cultural Response

M817: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours.

Organism	Inoculum (CFU)	Growth				
Escherichia coli ATCC 25922	50-100	luxuriant				
Salmonella Typhi ATCC 6539	50-100	luxuriant				
Staphylococcus aureus ATCC 25923	50-100	luxuriant				

Streptococcus pyogenes ATCC 19615	50-100	good-luxuriant				

Reference

1. Gould J. C., Duerden B. I., 1983 (Ed.), J. Clin. Pathol., 36: 963-977
2. Collee J. G., Fraser A. G., Marmion B. P., Simmons A., (Eds.), Mackie and McCartney, Practical Medical Microbiology, 1996, 14th Edition, Churchill Livingstone
3. Von Haebler T., Miles A. A., The Journal of Pathology and Bacteriology, Vol. 46, Issue 2, Pages 245- 252.

Storage and Shelf Life

Store below 30°C and the prepared medium at 2-8°C. Use before expiry date on the label.